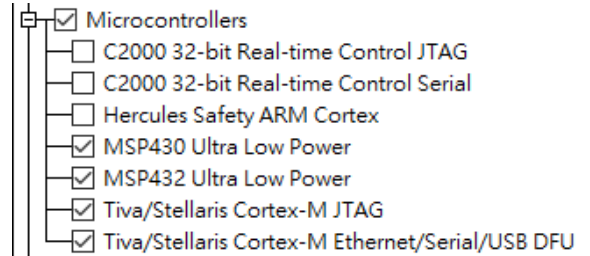# EPD Extension Kit Gen2 (EXT2) - Quick Start Guide: **EXT2 QSG**

1. Understand your LaunchPad name (MSP-EXP430F5529LP, MSP-EXP432P401R or EK-TM4C123GXL) and EPD type & size

2. Download project code and software

    (A) [EPD Extension Board Gen2 (EXT2) project code and PDi Apps](#). You will be asked to fill out basic data. PDi Apps is for demonstrating with EXT2 kit and EPDs. Install this Apps utility in your computer.

    (B) There are two ways to program the firmware into LaunchPad

    (a) [UniFlash](#): for programming firmware into your LaunchPad. Install it in your computer. During installation, select the microcontroller of your LaunchPad. Ex. MSP-EXP430F5529LP to select "MSP430 Ultra Low Power", MSP-EXP432P401R to select "MSP432 Ultra Low Power", EK-TM4C123GXL to select both of "Tiva/Stellaris Cortex-M"

    (b) CCS (Code Composer Studio): for advanced user to develop and debug with project code. Please install the correct driver library in advance. (refer to EXT2 User's Guide at section 2.2.2)
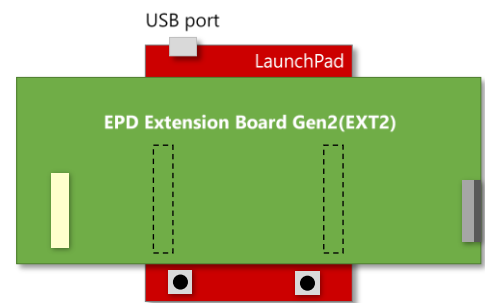
3. Adjust the jumper on LaunchPad

MSP-EXP430F5529LP	MSP-EXP432P401R	EK-TM4C123GXL
eZ-FET jumper: JP8:		 PWR at DEBUG side

4. Configuration of the DIP switch at the backside of EXT2 board by the driver type and EPD size

     1 for ON (up), 0 for OFF (down), - for don't care.

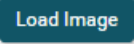| Driver type and EPD size	S1	S2	S3	S4	S5	S6	S7	S8
(eTC) 1.44 2.0	0	0	0	0	0	0	1	-
(eTC) 1.9 2.6 2.71	0	0	0	0	0	0	0	-
(iTC) 1.54 2.13 2.66 2.71 2.87 3.7 4.2 4.37 5.8 7.4 9.7 12.2	0	1	0	1	0	1	0	-

5. Staking EXT2 board on LaunchPad like the picture at right and connect USB cable to LaunchPad and your computer.

6. Connect the EPD to the EXT2 board

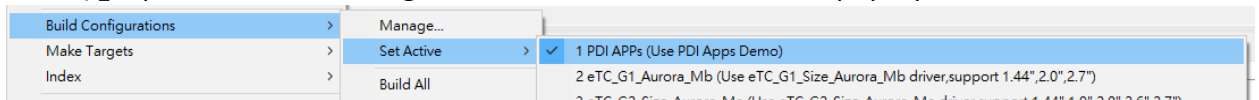| Connecting with 40-pins eTC connector (J1)	Connecting with 24/26-pins iTC connector (J3/J4)

7. Load project and program firmware into LaunchPad

- For (a): by UniFlash

  (1) Install (a) and run it. click [Select] button to select "EPD_Extension_Board_*LaunchPadName*.ccxml" under [Output] / [UniFlash] folder of (A).

  (2) After loading the configuration in UniFlash, and click [Browse] button to select "*LaunchPadName*.out" file under [Output] folder of (A) into the list.

  (3) Click [Load Image] button to start programming firmware into your LaunchPad.

- For (b): by CCS

  (1) Run CCS and load the (A) EXT2 project code

  (2) Right click on the project name of your connected LaunchPad and find 「PDI APPs (Use PDI Apps Demo)」 option at [Build Configurations] / [Set Active] from the pop-up submenu.

  (3) Click on the [Debug] button from the tool bar

  Make sure there is no errors in the console. Click [■] Terminate button back to CCS Edit.

8. Run PDI_Apps [PDI_Apps], the LaunchPad should be detected and reported firmware version.
   Select correct panel size and panel type as your connected EPD.
   Selected the OTP if your EPD is iTC type.

9. Click [folder] button to select the image folder as your EPD size. The images will be listed in the area.

   Double click on the image you want to show on EPD and click [✓] button to update the image on EPD.

💡 Leave your message if you've gotten issue working with EXT2 after following User's Guide of EXT2 kit.